

DTF INLINE

Max 1600 / Mini Pro



Installation Guide

Version 1.0.0

ADKINS

Foreword

The purpose of this document is to provide a comprehensive guide for engineers and technicians of authorised Adkins dealers covering the installation, inspection and calibration of the Adkins DTF Inline.

It is the responsibility of the installing technician to ensure that this guide is followed in full. Doing so confirms that the system is correctly installed, calibrated and fully operational prior to handover, while ensuring that any issues identified during installation are, where possible, resolved before sign-off to the end user.

This document should be used in conjunction with other Adkins resources, including our YouTube channel, Dealer Portal and the full user manuals. The user manuals contain detailed operating and maintenance information, together with the CE Declaration of Conformity for Adkins Inline DTF equipment.

Intended Use and Operating Modes

Adkins Inline DTF equipment is intended for the automated application and curing of adhesive powder on DTF printed film. Use outside of this intended purpose may result in unsafe operation.

The Adkins Inline Max 1600 may be operated using either a single roll of DTF film between 1200 mm and 1600 mm wide, or two narrower rolls up to 600 mm wide each.

The Adkins Inline Mini Pro 900 may be operated using single rolls of either 900mm, 800mm, or 600mm wide DTF film.

The Adkins Inline Mini Pro 600 may be operated using a single roll of 600mm wide DTF film.

When operating the Max 1600 in Dual Roll Mode, both rolls must be printed by the same printer using a single print engine. Operation with two separate printers is outside the intended use of the system.

Adkins does not warrant performance or operation outside the parameters specified in this manual, including the use of Dual Roll Mode (Max 1600 only) with output from two separate printers.

Included with the System

The following items are supplied with the Max 1600:

- 1 × Adkins Inline Max 1600
- 2 × Electrical Cabinet Keys
- 1 × IEC C19 to IEC 60309-1 2P+E 16 A ("Commando") Power Cable
- 2 × Take-Up Rollers
- 4 × Media Flanges for Take-Up Rollers
- 1 × 3 mm Allen (Hex) Key
- Minimum 4 × M4 Machine Bolts
- 4 × Trough Guide Plates
- 1 × Take-Up Roller Bracket
- 1 × Oil Collection Tray
- 2 x Removal Ramps

The following items are supplied with the Mini Pro 900/600:

- 1 × Adkins Inline Mini Pro 900/600
- 2 × Electrical Cabinet Key
- 1 × 13A Type G Plug – IEC C19 Lockable Power Cable
- 1 × 16A Type F Plug – IEC C19 Lockable Power Cable
- 1 × Take-Up Roller
- 1 × Powder Removal Tool
- 2 × Media Flanges for Take-Up Rollers
- 2 × Trough Guide Plates
- 2 x Removal Ramps

If any items are missing or damaged, do not proceed with the installation until the issue has been reported to Adkins Technical Support.

Symbol meanings



Important notes regarding use of the machine are given with this symbol. Use as reference information.



Indicates the corresponding page for related information.



Indicates a precaution requiring attention (including cases of danger or warnings). Specific precautions are shown in the figure.



Indicates a prohibited action. Specifically prohibited actions are shown in the figure.



Indicates an action that must be taken or instructions that must be followed. Specific instructions are shown in the figure.



Failure to observe the instructions given with this symbol may result in death or serious injuries to personnel. Be sure to read the precaution carefully and use the machine



Failure to observe the instructions given with this symbol may result in injury to personnel or damage to property.



"Warning; electricity" and it is used to warn people about the risk of coming into contact with electricity (e.g. electric shock, electrocution hazard, hazardous voltage).



"Hot Surface" and it is used to warn people to take care to avoid coming into contact with a hot surface



"Crushing Hazard" and it is used to warn people to take care to avoid coming into contact with moving parts during operation.

Health and Safety

The installation of Adkins Inline DTF equipment must only be carried out by competent and trained technical staff employed by approved Adkins dealers. Adkins provides training to new dealers and ongoing training to maintain technical competency.



Safety devices, including emergency stop switches and interlock sensors, must not be bypassed or overridden.

Ensure that the electrical cabinet side panel is fitted before the system is connected to the mains power supply.



Ensure that the Adkins Inline Max 1600 is connected to a properly earthed 230 V AC, 50 Hz, 16 A power supply via an IEC 60309-1 2P+E ("Commando") socket. Do not use extension leads.

Do not touch live electrical components.



Do not touch the heating elements or other areas inside the oven hood once the system has heated.

Always allow sufficient time for the system to cool before carrying out any maintenance or internal checks following operation.



Keep hands away from gears and other moving components whilst the machine is connected to a power supply.

Do not wear ties, loose-fitting clothing or loose-fitting jewellery whilst installing, operating or maintaining the system.



The system must be fully isolated from the mains supply before any panels are removed or internal components are accessed, unless a specific procedure in this manual requires the system to remain powered for inspection, calibration or testing.



Where powered operation is required, only trained personnel shall perform the procedure, exercising caution to avoid contact with live electrical components, moving parts and hot surfaces.

When working with DTF powder, appropriate PPE shall be worn, including eye protection and a suitable dust mask (minimum FFP2/P2 specification).

Ensure that the system is operated in a well-ventilated area to prevent the accumulation of fumes generated during the curing process.



Max 1600 / Mini Pro 900/600 - Installation Guide

Installation, Checking and Adjustment Procedures

The following table is a linked, step-by-step guide, to the tasks which should be performed by the installing technician. We advise using this table as a checklist, which can be printed or saved after each install, to evidence that the system has been installed correctly and fully checked over.

<u>1</u>	System Installation	p.9	Complete	Max 1600	Mini Pro
<u>1.1</u>	Unbox and place system in front of the DTF printer	p.9	☐	☒	☒
<u>1.2</u>	Ensure both powder collection trays can be accessed	p.9	☐	☒	☒
<u>1.3</u>	Set a gap of around 400-550mm between systems	p.9	☐	☒	☒
<u>1.4</u>	Centralise film loaded in printer to front vacuum roller	p.9	☐	☒	☒
<u>1.5</u>	Ensure that the two systems are squared to one another	p.9	☐	☒	☒
<u>1.6</u>	Lower the feet on the unit	p.9	☐	☒	☒
<u>1.7</u>	Remove the side panels from the system	p.9	☐	☒	☒
<u>1.8</u>	Remove the transportation bolts which secure the oven hood	p.10	☐	☒	☒
<u>1.9</u>	Remove the take-up tension weight plates from both sides of the tension bar	p.10	☐	☒	☒
<u>1.10</u>	Remove the cable tie and release the Oil Drain Tube	p.10	☐	☒	☒
<u>1.11</u>	Fit the oil collection tray	p.10	☐	☒	☒
<u>1.12</u>	Position both Take-Up Brackets	p.10	☐	☒	☒
<u>1.13</u>	Fit the Take-Up Rollers	p.10	☐	☒	☒
<u>1.14</u>	Align the Take-Up Rollers and Brackets	p.10	☐	☒	☒
<u>2</u>	Component and Wiring Checks	p.11	Complete	Max 1600	Mini Pro
<u>2.1</u>	Check the cabling between the Thyristor Board and Oven Hood	p.11	☐	☒	☒
<u>2.2</u>	Check that the electrical connectors and mechanical components have not become loose in transit	p.11	☐	☒	☒
<u>2.3</u>	Check the filters are installed correctly and that they have not become loose in transit	p.11	☐	☒	☒
<u>2.4</u>	Replace the side panels on both sides of the system	p.11	☐	☒	☒

Max 1600 / Mini Pro 900/600 - Installation Guide

<u>3</u>	Connecting Power to the System and Initial Boot	p.12	Complete	Max 1600	Mini Pro
<u>3.1</u>	Identify the correct 230 V AC, 50 Hz, 16 A power supply via an IEC 60309-1 2P+E ("Commando") socket required	p.12	☐	☒	☒
<u>3.2</u>	Connect the system to the buildings mains power supply	p.12	☐	☒	☒
<u>3.3</u>	Power on the system and check that it loads correctly	p.12	☐	☒	☒
<u>4</u>	Firmware Update	p.12	Complete	Max 1600	Mini Pro
<u>4.1</u>	Check the currently installed firmware version and update if an updated version is available	p.12	☐	☒	☒
<u>5</u>	Sensor Calibrations, Checks and Adjustments	p.12	Complete	Max 1600	Mini Pro
<u>5.1</u>	Calibrate the powder weight sensor	p.12	☐	☒	☒
<u>5.2</u>	Calibrate the take-up tension sensor	p.13	☐	☒	☒
<u>5.3</u>	Check the sensitivity level of the Film In sensor and adjust if necessary	p.14	☐	☒	☒
<u>5.4</u>	Check the sensitivity level of the rear film sensor and adjust if necessary	p.15	☐	☒	☒
<u>6</u>	Powder Level Indicator LED Colour Configuration	p.16	Complete	Max 1600	Mini Pro
<u>6.1</u>	Configure the Powder Level Indicator LED Colours	P.16	☐	☒	☒
<u>7</u>	Functionality Checks	p.17	Complete	Max 1600	Mini Pro
<u>7.1</u>	Check the operation of the Emergency Stop Switch	p.17	☐	☒	☒
<u>7.2</u>	Test the powder shaking motor and powder cover sensor	p.17	☐	☒	☒
<u>7.3</u>	Test the heating system, heat elements and where applicable the oven hood sensor.	p.17	☐	☒	☒
<u>7.3.1</u>	Check that the pre-heat rises from ambient room temperature to the set temperature.	p.17	☐	☒	☒
<u>7.3.2</u>	Check that the main heat rises from ambient room temperature to the set temperature.	p.17	☐	☒	☒
<u>7.3.3</u>	Check that the main heat rises from ambient room temperature to the set temperature.	p.17	☐	☒	☒
<u>7.3.4</u>	Check that the heat elements function correctly and, where applicable, these deactivate while the hood sensor is not depressed.	p.17	☐	☒	☒
<u>7.4</u>	Check the functionality of the vacuum roller motors.	p.17	☐	☒	☒

Max 1600 / Mini Pro 900/600 - Installation Guide

7.5	Check the moving mesh moves in the correct manner.	p.18	☐	☒	☒
7.6	Test the vacuum power to the vacuum rollers.	p.18	☐	☒	☒
7.7	Test the dusting system and powder shortage alarm system.	p.18	☐	☒	☒
7.8	Observe the functioning of the powder recirculation system.	p.19	☐	☒	☒
7.8.1	Observe the powder recirculation and pick-up screws.	p.19	☐	☒	☒
7.8.2	Observe the powder dusting screw.	p.20	☐	☒	☒
7.8.3	Test the powder shortage alarm system.	p.20	☐	☒	☒
7.9	Test the function of the take-up roller and take-up tension bar.	p.20	☐	☒	☒
8	Testing the operation of the machine in Auto mode	p.21	Complete	Max 1600	Mini Pro
8.1	Ensure the system functions fully during all 3 stages of Auto Mode use.	p.21	☐	☒	☒
8.1.1	Using the machine in Partial Auto mode	p.21	☐	☒	☒
8.1.2	Using the machine in Full Auto mode	p.21	☐	☒	☒
8.1.3	Using the machine in Post-Cut Feed mode	p.21	☐	☒	☒
9	Recommended Customer Training Points	p.22	Complete	Max 1600	Mini Pro
9.1	Workflow	p.22	☐	☒	☒
9.2	Maintenance	p.23	☐	☒	☒
9.2.1	The importance of DTF maintenance	p.23	☐	☒	☒
9.2.2	Pre-Shutdown mode	p.23	☐	☒	☒
9.2.3	Manual Cleaning	p.23	☐	☒	☒
9.2.4	Filter Replacement	p.23	☐	☒	☒
9.3	How to access Technical Support	p.24	☐	☒	☒
10	Revision History	p.25	☐	☒	☒

I, ... technician from
....., hereby do certify, that all the above checks and
calibrations have been performed on the

installation of the Adkins
.....

with serial number
.....

Signature

Date

Once the installation is complete, please complete a **Warranty Registration Form**
on the **Adkins Dealer Portal** to begin the 12-month warranty cover.

Visit our **Support Website** for our latest support articles and to raise a ticket with our
support team. You can also find our dedicated **Adkins YouTube** channel.

You can find the latest Dealer Communication updates on our **Dealer Portal** as well
as the latest firmware, user manuals, and product information.

This document is for the attention of authorised Adkins Dealers only and should not be
distributed to end users.

1. System Installation

1.1 Unbox and place the Inline in front of the DTF Printer.

1.2 *Max 1600 only* Ensure both powder collection trays can be accessed

Ensure that there is sufficient space in the install location for the two powder collection trays to be removed and powder from these be poured back into the main powder troughs. 1100mm space either side of the system is required.

1.3 Set a gap of around 400-550mm between systems

The gap between the printer and the front of the cure unit should be around 400-550mm*. This does not need to be specific but should be the same both sides of the system.

*If pairing the Adkins unit with an Epson SC-G6000 the gap should be sufficient to enable all ink draws to be removed from the printer without being obstructed by the Adkins system, whilst still noting the importance of the gap being the same on both sides of the unit.

1.4 Centralise film loaded in printer to front vacuum roller

Ensure the Adkins Inline is centralised to media in the printer so that the film will be central when fed into the machine. Feed enough film out to reach the front vacuum roller and make sure the distance to the side of the chassis is equal on both sides.

*When setup for use in Single Roll Mode: The Inline Max 1600 should be aligned so that the film (loaded in the printer ready to print) should be running directly in the middle of the system (centred on the vacuum roller).

1.5 Ensure that the two systems are squared to one another

Ensure that the gap between the Adkins and the printer is identical on both sides of the system (measured from the front corner of the Adkins closest to the touchscreen display and front corner of the Adkins furthest from the touchscreen display) this ensures that both systems are squared to one another.

1.6 Lower the feet on the system

The feet should always be used to ensure the system is not knocked out of alignment. Use a spirit level to ensure that the machine is levelled correctly.



1.7 Remove the side panels from the machine

IMPORTANT Ensure the system is isolated from the mains supply before removing the side panels.



Using the supplied Electrical Cabinet Key, unlock and remove the side panels from the system.

1.8 Remove the transportation bolts which secure the oven hood**1.9 *Mini Pro only* Remove the take-up tension weight plates from both sides of the tension bar****1.10 Remove the cable tie from and unfold the oil drain tube**

Drop the tube through the hole on the base of the machine so that it is visible by the user.

1.11 *Max 1600 only* Fit the oil collection tray

Fit the oil collection tray under the oil drain tube and position the tube inside the tray.

1.12 *Max 1600 only* Position both Take-Up Brackets

Using the supplied 3 mm Allen Key, remove the two bolts securing the Take-Up Bracket. Extend the right Take-Up Bracket so that both Take-Up positions can be used.

Locate the left Take-Up Bracket and place this in position in the space on the left side of the machine. Use the 3 mm Allen Key and the M4 bolts supplied to secure this in place.

Ensure each bracket are in the extended position is reached. The correct bolt positions are indicated by the arrow slots on each bracket.

Refit the original two bolts and install two additional supplied M4 bolts to each bracket, resulting in a total of four securing bolts per bracket.

1.13 Fit the Take-Up Rollers

Fit 2x Media Flanges to each Take-Up Roller so that the tapered end faces inwards (towards each other).

Place each Take-Up Roller into position on the Take-Up Brackets, ensuring that the gearing is seated correctly and both ends sit in the bearings nicely.

1.14 *Max 1600 only* Align the Take-up Rollers and Brackets

Ensure both Take-Up Brackets are aligned and level.

Measure the rear end of each bracket to the chassis and ensure that the measurements are the same for both left and right brackets. If not, use the 4x M4 bolts to adjust the bracket slightly.

Measure the end of the Take-Up roller to the chassis on each side to make sure they are equal on either side. Use a spirit level to make sure that each Take-Up Roller is level.

Ensure all bolts are securely tightened before proceeding.

2. Component and Wiring Checks

2.1 Check the cabling between the Thyristor Board and the Oven Hood



This is primarily to ensure there is sufficient slack that these cannot be pulled loose from the connectors on the Thyristor Board, while also to ensure that they will not rub or pull against the edge of the metal holes through which they protrude.



Affected –
Modify Wiring



Un-affected –
No action required



IMPORTANT: ensure that the system is isolated from the mains power supply during this step.

2.2. Check that no electrical connections or mechanical components have become loose during transit.

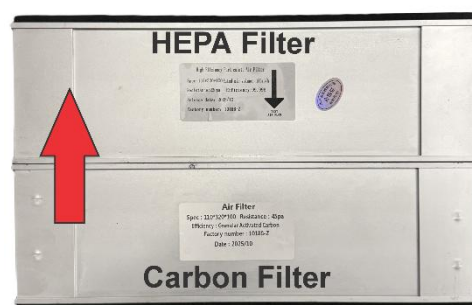


IMPORTANT: ensure that the system is isolated from the mains power supply during this step.

2.3. Check that the filters are correctly installed and that these have not moved in transit.

The correct order of the filters is with the carbon filter on the bottom and HEPA filter on top. The correct orientation is with the black foam gasket at the bottom of the Carbon Filter and on the top of the HEPA filter with each filter sat metal to metal in the middle.

Push the filters into the system as far as they will go to ensure they are correctly seated.



2.4 Replace the side panels on both sides of the system

Ensure that these are secured by tightening the thumb screws at their base.

3. Connecting Power to the System and Initial Boot



3.1 Max 1600 only Identify the correct 230 V AC, 50 Hz, 16 A power supply via an IEC 60309-1 2P+E ("Commando") socket required

Ensure that the power supply is correct (230 V AC, 50 Hz, 16 A power supply via an IEC 60309-1 2P+E ("Commando") socket) and verified by a qualified electrician.

3.2 Connect the system to the buildings mains power supply

This must be a properly earthed power supply as referenced in the User Manual. **Do not use extension leads.**

3.3 Power on and check that it loads correctly

Check that the loading of the system progresses beyond the loading screen and beyond the oil valve closure reminder when tapped away, and that the firmware version is shown in the top right corner of the Main page on the touchscreen display (not "0").

4. Firmware Update

4.1 Check the installed firmware version and update if available

Check the firmware version currently installed on the system against the latest available on Adkins' Dealer Portal. If there is an update available, run the update and configure any Advanced Parameters necessary, as per the firmware update guide provided.

If you can't access the Dealer Portal, please contact Adkins Sales or Adkins Support to create an account.

5. Calibrations

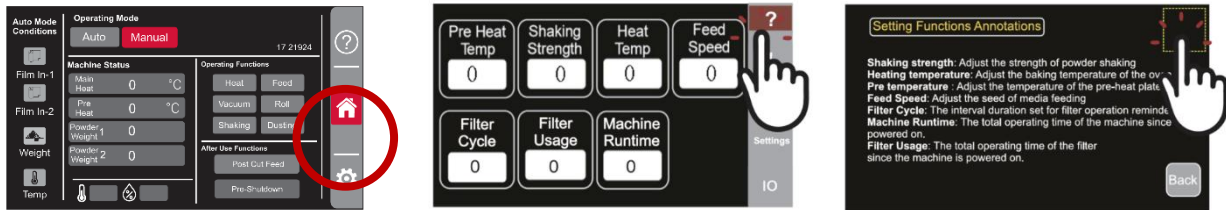
5.1 Calibrate the Powder Weight Trough Sensors

The Inline Max 1600 is fitted with two powder weight troughs, each monitored by an individual potentiometer sensor. As both sensors share a single electronic calibration, both troughs must be calibrated simultaneously.

Note: The calibration process differs slightly depending on whether the system is intended to be used in Single Roll Mode or Dual Roll Mode. For Single Roll Mode, two trough guides must be installed during calibration (one in each trough). For Dual Roll Mode, all four trough guides must be installed (two in each trough). This is necessary to ensure that 0% powder weight is registered correctly.

The Inline Mini Pro is fitted with one powder weight trough which can be calibrated in the same way as previous models.

Go to  > ? [question mark icon] > top right corner of the display. This will



display the password input menu. The password to access the Calibrations menu is **1234**.

With the appropriate number of Trough Guides installed but no film or powder weight present in either powder weight trough, set the **Initial** Position for the **Weight** calibration. This icon will change from grey to **red**.



Then, place a 200 g (± 10 g tolerance) weight into each powder weight trough. Whilst the weights are in place, set the **Lowest** Position for the **Weight** calibration. This icon will change from black to **red**.

IMPORTANT: This step must be performed with the system powered on to allow calibration via the control software. Exercise caution and avoid contact with any live electrical or moving components whilst placing the calibration weights into the troughs. Only trained personnel shall perform this task.

Once both positions have been configured, press Back and navigate to the Main page on the touchscreen display and then restart the system to save this calibration.



After restart, verify the calibration by opening the dusting cover panel and gently and progressively raising and lowering both powder weight troughs whilst observing the powder weight values on the touchscreen display. If the values are not consistent throughout the range, repeat this calibration.

This verification must be performed under the same safety precautions as the calibration procedure.

5.2 Check the Function of the Take-Up Tension Bar Sensor

Using the Electrical Cabinet Key, unlock and remove the panel closest to the Take-Up Roller(s).

Mini Pro 600 / 900 Only

With the system powered on and running in **Manual** mode, activate **Roll** and confirm the take-up roller is turning. Lift the tension bar and observe the take-up roller; it should stop turning until the tension bar is lowered.

Max 1600 Only

IMPORTANT: This procedure must be performed with the panel removed and the system powered on. Exercise caution and avoid contact with any live electrical components, moving parts or rotating rollers whilst carrying out this check. Only trained personnel shall perform this procedure.

With the system powered on and running in **Manual** mode, lift each tension bar in turn and observe the LED on the rear of each sensor. The LED should be illuminated whilst the bar is in its lower position and its swing arm is detected by the sensor. The LED should be unlit when the bar is lifted, and the swing arm is no longer detected by the sensor.

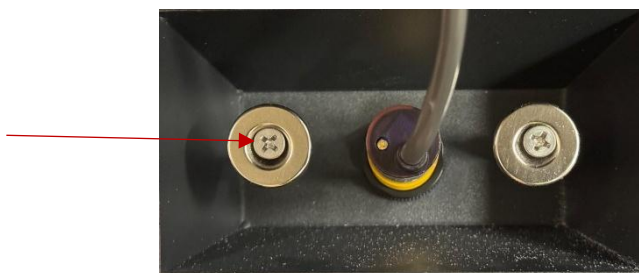
If the LEDs do not operate as described, adjust the position of the sensors by loosening the securing nuts using a 17 mm spanner and moving the sensor closer to or further away from the swing arm. Recheck the sensor operation after each adjustment until the LEDs operate as described above.

Once the check and any necessary adjustments have been completed, refit and secure the panel before proceeding to the next stage of the installation.

5.3 Check the Function and Sensitivity of the Front Film In Sensors**Mini Pro 600 / 900 Only**

If the film in sensor is not already attached to the bracket, loosen the outer locking nut off the sensor, place the sensor inside the bracket with the front of the sensor aimed outwards, then replace the locking nut. Make sure the sensor is secure and points perpendicular to the bracket.

You may need to loosen the screws that hold the magnets on the inside of the film sensor bracket to allow the bracket to sit correctly on the chassis.



With the system powered on, navigate to the IO menu by selecting  > ? [question mark icon] > top right corner of the display. This will display the password input menu. The password to access the IO menu is **28765**.

Cover the front **Film In 1** sensor (closest to the touchscreen) by positioning your hand approximately 100 mm from the sensor for several seconds. Observe the **X1 – Film In 1** indicator in the IO menu. The indicator should change from **red** to grey.

Remove your hand from the sensor. Within a few seconds, the **X1 – Film In 1** indicator should return from grey to **red**.

Repeat this test several times to confirm that the indicator changes state reliably.

If the indicator remains **red** whilst the sensor is covered, increase the sensor sensitivity by turning the adjustment screw on the rear of the sensor clockwise. Restart the system and repeat the test.

If the indicator changes to grey when the sensor is covered but does not return to **red** once the sensor is uncovered, decrease the sensor sensitivity by turning the adjustment screw on the rear of the sensor anticlockwise. Restart the system and repeat the test.

Max 1600 Only

*Repeat this procedure for the second front **Film In 2** sensor (furthest from the touchscreen). Observe the **X'1 – Film In 2** indicator in the IO menu whilst carrying out the test. Assistance from a second person may be required.*

5.4 Check the Function and Sensitivity of the Rear Film Out Sensor

With the system powered on and the IO menu displayed, ask a second person to cover the rear Film Out sensor by positioning their hand approximately 50 mm from the sensor for several seconds. Observe the **X2 – Film Out** indicator in the IO menu. The indicator should change from **red** to grey.

Ask the other person to remove their hand from the sensor. Within a few seconds, the **X2 – Film Out** indicator should return from grey to **red**.

Repeat this test several times to confirm that the indicator changes state reliably.

If the indicator remains **red** whilst the sensor is covered, increase the sensor sensitivity by turning the adjustment screw on the underside of the sensor clockwise. Restart the system and repeat the test.

If the indicator changes to grey when the sensor is covered but does not return to **red** once the sensor is uncovered, decrease the sensor sensitivity by turning the adjustment screw on the underside of the sensor anti-clockwise. Restart the system and repeat the test.

6. Powder Level Indicator LED Colour Configuration (Optional)

6.1 Configure the Powder Level Indicator LED Colours

The system is fitted with Powder Level Indicator LEDs, located on either side of the machine, which change state depending on the powder level by the powder shortage sensors. Three colours are used to indicate the following conditions:

1. **Solid illumination of Colour 1** – sufficient powder level is detected when dusting / in both troughs.

Suggested colour R0, G0, B255

2. **Flashing Colour 2** –

Max 1600 - Trough 1 powder level is low or empty

Mini Pro – no powder is sensed by the shortage sensors

Suggested colour R255, G155, B0

3. **Flashing Colour 3** –

Max 1600 - Trough 2 powder level is low or empty

Mini Pro – powder shortage sensors are misaligned

Suggested colour R255, G0, B0

The RGB values associated with each colour can be configured and tested as follows:

- Navigate to the password input screen as described previously.
- Enter the password **38765**. This will display the RGB Colours menu.
- Set the desired RGB values for any of the three colour states and use the **Test** button to illuminate the indicator LEDs and verify the colour displayed.
- Once configuration is complete, navigate to the Main page on the touchscreen display and restart the system to save the new settings.

Max 1600 Only

If both troughs are low or empty, the indicator LEDs will alternate between Colour 2 and Colour 3.

7. Functionality Checks

7.1 Test the emergency stop switch



Depress the switch while the system is powered on. Rotate the top of the switch to release this and ensure the system powers back on as expected.

It is an **IMPORTANT** health and safety measure that this is the first function checked.

7.2 Test the powder shaking motor and powder cover sensor

Do so by ensuring that the system is in **Manual** mode, ensuring that the *Shaking Strength* is set to a minimum of 55% and activating the **Shaking** function. Open the powder cover, at this stage the shaking should stop. Close the powder cover, at this stage the shaking should restart.

7.3 Test the heating system, heat elements and the oven hood sensor.

7.3.1 Test the Pre Heat panel to ensure this heats correctly

Set the *Pre Heat* setting to 60 degrees. Ensure that the system is in **Manual** mode and the **Heat** and **Feed** functions are active, observe the *Pre Heat* indicator box on the touchscreen display and ensure this shows the temperature rising from ambient / room temperature to the set temperature.

7.3.2 *Max 1600 only* Check that the Main Heat rises to the set temperature

Ensure that the system is in **Manual** mode, ensure that the *Main Heat* is set to a minimum of 50 degrees and activate the **Heat** and **Feed** functions. Once the *Pre-Heat* has reached the set temperature, open the oven hood. Depress the hood sensor microswitch. Wait for several minutes. Check that the tungsten elements within the system (the left and right split bulbs) glow. Once satisfied with these elements, release the microswitch and ensure that they power off and then close the oven lid.

*Please note that the elements will not immediately heat once the microswitch is depressed and only the tungsten elements will glow at all. For this reason, the elements should be observed over a period of several minutes.

7.3.3 *Mini Pro only* Check that the Main Heat rises to the set temperature

Ensure that the system is in **Manual** mode, ensure that the *Main Heat* is set to a minimum of 50 degrees and activate the **Heat** and **Feed** functions. Once the *Pre-Heat* has reached the set temperature, open the oven hood. Depress the hood sensor microswitch. Wait for several minutes. Check that the elements within the system (upper and lower) glow. Once satisfied with these elements, release the microswitch and ensure they power off and then close the oven lid.

7.3.4 Check that the heat elements function correctly.

Monitor the time that the system takes for the *Main Heat* temperature to reach the set value while the hood is closed. This should take approximately 15-25 minutes.

7.4 Test the functionality of the vacuum rollers

With the system in the same state as the previous heater tests: observe the vacuum rollers. Ensure that these are running away from the printer and towards the exit of the Inline system.

If these are not rotating in the correct direction, navigate to the Advance Parameters menu by accessing the password input screen in the same manner as previously described ( > ? [question mark icon] > top right corner of the display) and inputting the password: **18765**.

The direction of the front vacuum roller is controlled by a binary choice (0 or 1) at parameter **16**. If this is rolling in the wrong direction, change this value to the other option (0 to 1, or 1 to 0).

The direction of the rear vacuum roller is controlled by a binary choice (0 or 1) at parameter **12**. If this is rolling in the wrong direction, change this value to the other option (0 to 1, or 1 to 0).

After changing either value, restart the system, which will save the new configuration. Then reactivate the **Feed** function and ensure that both rollers are rotating correctly.

7.5 *Max 1600 only* Test the functionality of the moving mesh belt

While Heat and Feed are active in Manual mode, the mesh belt should be moving away from the printer.

If this is not rotating in the correct direction, navigate to the Advance Parameters menu by accessing the password input screen in the same manner as previously described ( > ? [question mark icon] > top right corner of the display) and inputting the password: **18765**.

The direction of the moving mesh belt is controlled by a binary choice (0 or 1) at parameter **17**. If this is rolling in the wrong direction, change this value to the other option (0 to 1, or 1 to 0).

7.6 Test the vacuum power to both vacuum rollers

To ensure there is sufficient to grip and move the film through the system, deactivate **Feed** and place a piece of film on each of the vacuum sections on the front roller and activate the **Vacuum** setting. Check that this is held by the vacuum roller and that the film does not slip.

Repeat this test to check the rear vacuum roller. Do so by placing a similar piece of film onto this whilst the **Vacuum** function remains active. **However, it is important that this film has enough length to cover the rear film sensor, as this part also dictates when the vacuum to the rear roller is activated.**



7.7 *Max 1600 only* Test the dusting system and powder shortage alarm system

IMPORTANT: when working with adhesive DTF powder, ensure that suitable PPE, as specified by the powder manufacturer, is always worn (minimum FFP2/P2 specification).



Pour into the centre of each of the main powder troughs, enough powder to block the powder shortage sensor light (once the red light is visible on the powder this is enough). Then activate the dusting function.



IMPORTANT: when testing the Dusting function, keep hands and loose clothing away from the moving dusting bar.

Powder should then drop from the powder troughs towards the powder weight troughs and powder collection troughs underneath.

Whilst the powder remains above the level of the sensor in both troughs, the Alert Light should be solidly illuminated (not flashing) the colour to which Alert Light Colour 1 is configured. As each powder trough empties and the powder shortage sensors indicate a shortage, refer to section 6.1 to check that the colour indicators are performing as expected.

7.8 *Mini Pro only* Test the powder recirculation system



The following tests should be performed with no powder in the recirculation system; although checks can still be made with powder in the system.

7.8.1 *Mini Pro only* Observe the powder recirculation screw

The powder recirculation screws should already be operating as the sequence begins once a function is activated. If none of the recirculation screws are turning, activate Shaking.



Open the powder cover and locate the powder hopper on the filter side of the machine. The powder pick-up screw (at the top of the powder hopper) should for 5 seconds, pause for 1-2 seconds, then turn for a further 5 seconds.

This should be rotating clockwise to draw the powder upwards.



Meanwhile, the powder recirculation screw (underneath the powder weight trough), should turn for 3 seconds (beginning 2 seconds after the pick-up screw starts) then pause for 2-3 seconds, then turn for a further 3 seconds before pausing for 3 seconds.

This should be rotating clockwise when observed from the powder hopper to draw powder towards the powder hopper.

7.8.2 Mini Pro only**Observe the powder dusting screw**

Test that the dusting screw and powder hopper stirring wheel turn as they should.



Activate **Dusting** and observe the powder dusting screw. This should turn counterclockwise (when observing from in front of the touch screen) to draw powder from the hopper into the middle of the machine.



While the powder dusting screw is active, the powder hopper stirring wheel should also be turning slowly. Open the powder cover and observe the powder stirring wheel in the powder hopper.

7.8.3 Mini Pro only**Test the powder shortage sensors**

While **Dusting** is active and the powder weight sensor displays 0, the powder shortage lights should indicate a fault by flashing preset colour 3 when no powder is falling. This should return to preset colour 1 when powder is sensed.

IMPORTANT: when working with adhesive DTF powder, ensure that suitable PPE, as specified by the powder manufacturer, is always worn (minimum FFP2/P2 specification).



Open the powder cover and pour 1kg of DTF adhesive powder into the powder hopper on the filter side of the machine. For guidance on using the powder recirculation system, please see our support article **Powder Recirculation – Usage Guide**.

7.9 Test the function of the take-up rollers and take-up tension bars

With the system running in Manual Mode, activate the **Roll** function. Check that the take-up roller rotates while the take-up tension bar is lowered and that this rotation stops rotating when the tension bar is lifted. Also, check that it winds backwards - towards the printer.

Max 1600 only

The mesh belt will always move forwards – away from the printer.

Continued

8. Machine Running Check

*This step can be performed when training the customer in the use of the system – see **9. Recommended Customer Training Points***

8.1 Ensure the system functions fully during the 3 stages of Auto Mode

Run at least 5 metres of print through the system, in Auto Mode, to check that all functions work as expected. This should encompass all three elements of using the system in Auto Mode. Auto mode relies on three conditions being met before feeding.

Film in – the machine must sense film in front of the film in sensor.

Powder Weight – the powder weight must be above 50. **Max 1600** – both troughs must be above 50.

Heat Temperature – the Main Heat and Pre Heat temperature must be within 5 degrees of the set values respectively.

8.1.1 Partial Auto mode

This is the period from initial loading up to the point that the film is attached to the take-up roller. The film will feed through the machine automatically but will still need intervention to attach it to the take-up roller.

8.1.2 Full Auto mode

This begins when the film is attached to the take-up roller which then pulls the film through the machine automatically. The machine should pause feeding when one of the three conditions for Auto mode are not met and begin feeding again when the conditions have been met.

8.1.3 Post-Cut Feed

This function feeds through the final part of the film once it has been cut from the printer. As the film will no longer cover the Film-In sensor, the machine will use the set speed to continue to feed the film through.

Full usage instructions can be found in the systems' user manual.

Continued

9. Recommended Customer Training Points:

Adkins recommend that the following areas are covered in more specific detail when training the end user. They include key information that is very beneficial for the user to be aware of.

9.1 Workflow

Follow the Workflow in the *basic operation* in the user manual. This is also shown below:

1. Turning the power on/off and Function explanations

Confirm that the machine completes the boot sequence and displays a firmware version number in the top right corner.

Explain and demonstrate each function and their purpose.

2. Loading Media

Ensure that the film-in sensor(s) are positioned at the highest usable point and that they detect when media is in front of them.

Feed the leading edge of the media through to the vacuum roller before beginning to print.

3. Pouring Powder

IMPORTANT: when working with adhesive DTF powder, ensure that suitable PPE, as specified by the powder manufacturer, is always worn (minimum FFP2/P2 specification).

Mini Pro (Powder recirculation) – Activate **Dusting** for 5 minutes prior to using the machine to allow the powder to reach the drop point in the dusting chamber.

4. Automatic Mode

Ensure the three conditions for **Auto Mode** are met and monitor until the film reaches the Take-Up roller. Continue monitoring to ensure smooth workflow.

5. Post Cut Feed

Before cutting the media from the printer activate **Post Cut Feed** to allow the machine to continue with the print run. The machine will continue to feed when film is not covering the Film-In sensor to allow the process to continue.

6. Pre-Shutdown Mode

Once printing has completed, or after 8-10 hours of use, activate Pre-Shutdown Mode and explain the maintenance.



9.2 Recommended Maintenance

9.2.1 The importance of DTF machine maintenance and filter replacement.

Regular maintenance can help to prevent a build-up of glycol, a byproduct of DTF curing, from damaging the machine and spoiling transfers. It also helps to clean the filters and prolong their lifespan.

For more information, please see the *Maintenance* section in the user manual.

9.2.2 Pre-Shutdown mode

Pre-Shutdown mode will activate all upper elements along with the extraction fans. This will help to evaporate and remove any glycol that has built up from the print run and should be carried out after 6-10 hours (typical working day) of usage.

Once complete, open the drain tap to let the glycol drain away.

Mini Pro – The powder recirculation and pick-up screws will also activate during this period to cycle the powder into the powder hopper to prevent moisture absorption. The dusting screw will also turn in reverse to push powder back into the hopper.

9.2.3 Manual cleaning



Once the machine has cooled to a safe working temperature, manual cleaning should be performed.



This involves opening the hood and cleaning any accessible surface to remove excess glycol to prevent build ups, as well as removing and cleaning the filters and surrounding areas.

For more information, please see the *Maintenance* section in the user manual.

9.2.4 Filter replacement

DTF Filters should be replaced regularly to avoid glycol building up inside the machine.

You should replace your filters when the machine prompts the Filter Change Reminder.

You may need to replace your filters earlier if the colour of the glycol gets darker or if you begin to see smoke coming from the filter side of the machine.

When replacing the filters, clean inside and around the filter box.

Instructions on replacing the filters and resetting the Filter Change Reminder are available in the user manual.

Continued

9.3 How to access Technical Support

Technical Support is available directly to end users from multiple sources. It is important that they are aware how to access support if they need to.

1. User Manual

You can find the User Manual for the machine on the [Adkins website](#). These are available in multiple languages translated from English. There are also specific Troubleshooting Guides available for each machine at the end of the User Manual.

These can be found here: [User Manuals](#)

2. Technical Support Articles

There are a wide range of Technical Support Articles available on the [Adkins Support website](#).

3. YouTube playlist

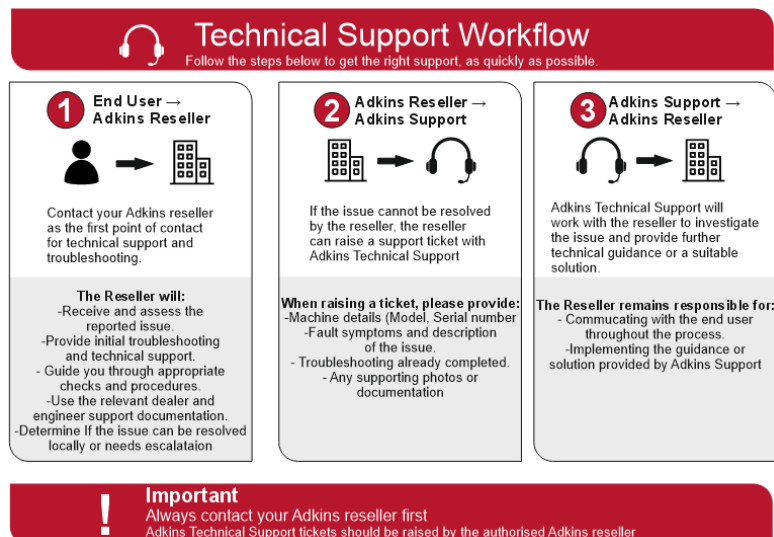
There is a dedicated **Adkins YouTube** channel including videos displaying a range of procedures including maintenance, pre-print preparations, operating checks.

4. Contact the Adkins Reseller

Adkins Resellers are responsible for initial support and troubleshooting if problems arise. There are Dealer Engineer Only Troubleshooting Guides available on the Adkins Dealer Portal for each specific machine.

5. Raise a support ticket with Adkins Support

Once the problem has been raised with the Adkins Reseller, the Reseller can then, if necessary, raise a ticket with Adkins on the [Adkins Support website](#). Adkins can then communicate with the Adkins Reseller to find a solution for the end user.



End of Installation Guide

If you have any queries, have encountered any issues, or find any information to be incorrect, please contact Adkins Support.

10. Revision History

Revision	Date	Description Of Changes
1.0.0	September 2026	Initial Release
1.0.1	October 2026	Addition of 10 Revision History Amendment of 9.1 Addition of Pre-Shutdown Mode Addition of 1.9 Remove the take-up tension weight plates from both sides of the tension bar